

WHAT IS CLAIMED IS:

1. A method of preventing damage to the excitable cells of a patient which comprises administering to said patient during or after said patient undergoes or has undergone an ischemic event, an effective amount of a compound which increases a transient potassium (K^+) current in the excitable cells of said patient.

2. The method of preventing damage to the excitable cells of a patient as claimed in claim 1, wherein said excitable cells are the neurons of the brain.

3. The method of preventing damage to the excitable cells of a patient as claimed in claim 1, wherein said excitable cells are the magnocellular neurons of the paraventricular nucleus of the hypothalamus.

4. The method of preventing damage to the excitable cells of a patient as claimed in claim 1, wherein said transient K^+ current is I_A .

5. The method of preventing damage to the excitable cells of a patient as claimed in claim 1, wherein said transient K^+ current is I_D .

6. The method of preventing damage to the excitable cells of a patient as claimed in claim 1, wherein said transient K^+ current is I_A and I_D .

7. The method of preventing damage to the excitable cells of a patient as claimed in claim 1, wherein said K^+ current is I_{TO} .

TO BE FORWARDED TO THE PATENT OFFICE

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8. The method of preventing damage to the excitable cells of a patient as claimed in claim 1, wherein said compound crosses the blood-brain barrier.

9. The method of preventing damage to the excitable cells of a patient as claimed in claim 1, wherein said compound is a vasopressin receptor antagonist.

10. The method of preventing damage to the excitable cells of a patient as claimed in claim 9, wherein said vasopressin receptor antagonist crosses the blood-brain barrier.

11. The method of preventing damage to the excitable cells of a patient as claimed in claim 1, wherein said compound is an angiotensin converting enzyme (ACE) inhibitor.

12. The method of preventing damage to the excitable cells of a patient as claimed in claim 11, wherein said angiotensin converting enzyme (ACE) inhibitor crosses the blood-brain barrier.

13. The method of preventing damage to the excitable cells of a patient as claimed in claim 1, wherein said compound is angiotensin-II receptor antagonist.

14. The method of preventing damage to the excitable cells of a patient as claimed in claim 13, wherein said excitable cells are the magnocellular neurons of the paraventricular nucleus of the hypothalamus.

15. The method of preventing damage to the excitable cells of a patient as claimed in claim 13, wherein said transient K^+ current is I_A .

16. The method of preventing damage to the excitable cells of a patient as claimed in claim 13, wherein said transient K^+ current is I_D .

17. The method of preventing damage to the excitable cells of a patient as claimed in claim 13, wherein said transient K^+ current is I_A and I_D .

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18. The method of preventing damage to the excitable cells of a patient as claimed in claim 13, wherein said angiotensin-II receptor antagonist crosses the blood-brain barrier.

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19. The method of preventing damage to the excitable cells of a patient as claimed in claim 13, wherein said angiotensin-II receptor antagonist is losartan.

20. The method of preventing damage to the excitable cells of a patient as claimed in claim 13, wherein said angiotensin-II receptor antagonist is saralasin.

21. An in vivo method for screening for a compound that increases a transient potassium (K^+) current in the excitable cells of a patient, comprising the steps of:

- (a) inducing ischemia in a subject;
- (b) assessing a transient K^+ current in said subject;
- (c) administering to said subject an effective amount of a test compound; and
- (d) assessing said transient K^+ current in said subject, wherein an increase in said transient K^+ current indicates that said test compound increases a transient K^+ current in the excitable cells of a patient.

22. An *in vitro* method for screening for a compound that increases a transient K^+ current in the excitable cells of a patient, comprising the steps of:
- (a) inducing an oxygen-deprived state mimicking ischemia in an isolated cell;
 - (b) assessing a transient K^+ current in said cell;
 - (c) administering to said cell an effective amount of a test compound; and
 - (d) assessing said transient K^+ current in said cell, wherein an increase in said transient K^+ current indicates that said test compound increases a transient K^+ current in the excitable cells of a patient.

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